

Name Key

Date _____

LESSON
10.6

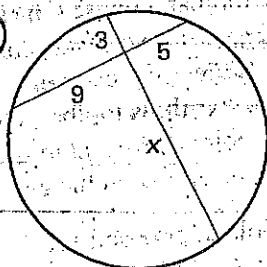
Practice A

For use with pages 688-695

Fill in the blanks. Then find the value of x .

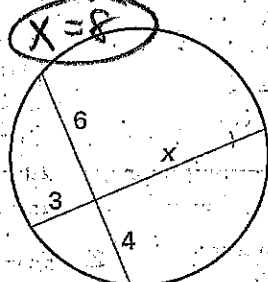
1. $x \cdot 3 = 5 \cdot 9$

$x = 15$



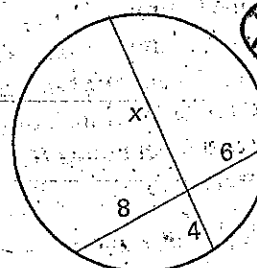
2. $6 \cdot 4 = 3 \cdot x$

$x = 8$



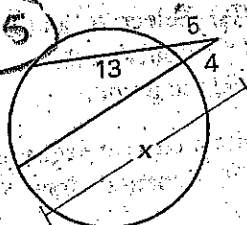
3. $x \cdot 4 = 8 \cdot 6$

$x = 12$



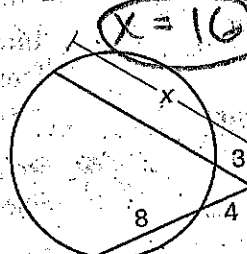
4. $4 \cdot x = 5 \cdot 18$

$x = 22.5$



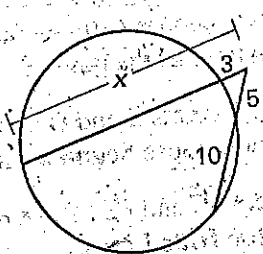
5. $3 \cdot x = 4 \cdot 12$

$x = 16$



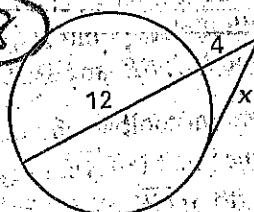
6. $3 \cdot x = 5 \cdot 15$

$x = 25$



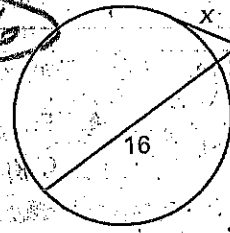
7. $x^2 = 4 \cdot 16$

$x = 8$



8. $x^2 = 2 \cdot 18$

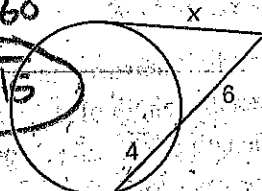
$x = 6$



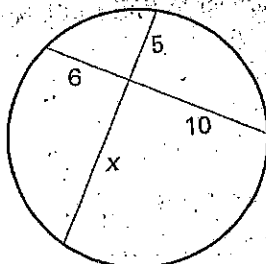
9. $x^2 = 6 \cdot 10$

$x = \sqrt{60}$

$x = 2\sqrt{15}$

In Exercises 10-24, find the value of x .

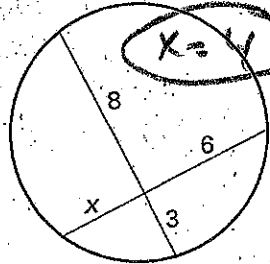
10.



$5x = 6 \cdot 10$

$x = 12$

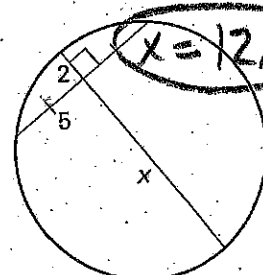
11.



$6x = 8 \cdot 3$

$x = 4$

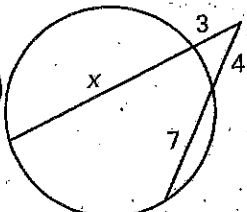
12.



$2x = 5 \cdot 5$

$x = 12.5$

13.

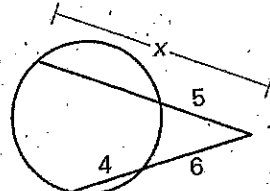


$3(x+3) = 4(11)$

$3x + 9 = 44$

$x = 11 \frac{2}{3}$

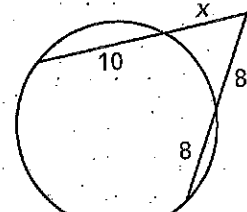
14.



$5x = 6 \cdot 10$

$x = 12$

15.



$x(x+10) = 8(16)$

$x^2 + 10x - 128 = 0$

$-10 \pm \sqrt{100 + 512} = -10 \pm \sqrt{612}$

$-10 \pm \sqrt{612}$

$x = 7.4$

LESSON
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Practice C

For use with pages 688-695

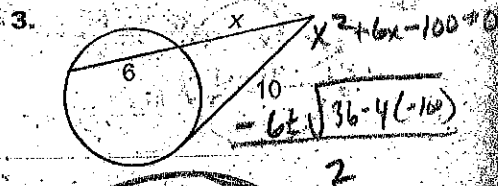
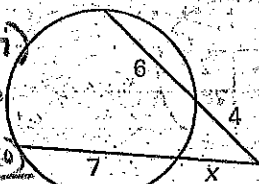
Skip 13

Find the value of x . Round decimal answers to the nearest tenth.

$$4(10) = x(x+7)$$

$$0 = x^2 + 7x - 40$$

$$-7 \pm \sqrt{49 - 4(-40)}$$



$$14(x+2) = 16^2$$

$$14x + 28 = 256$$

$$14x = 228$$

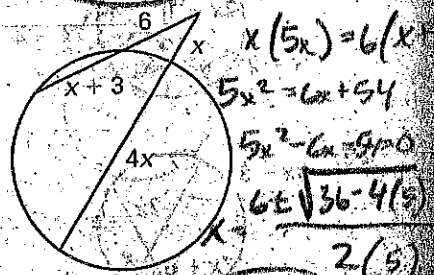
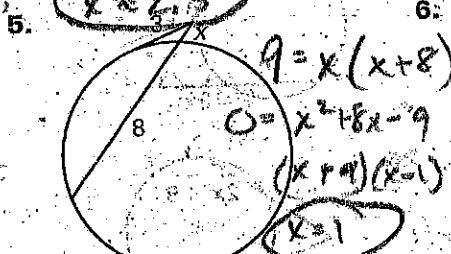
$$x \approx 16.3$$

$$x^2 + 6x - 100 = 0$$

$$-6 \pm \sqrt{36 - 4(-100)}$$

$$2$$

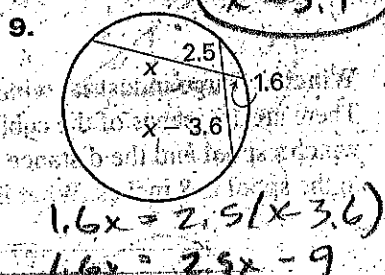
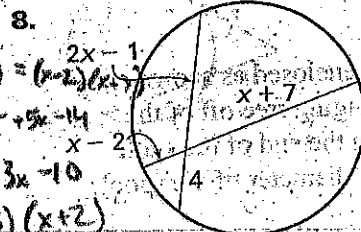
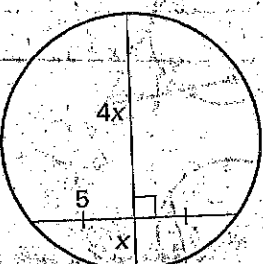
$$x \approx 7.4$$



$$4x(x) = 25$$

$$4x^2 = 25$$

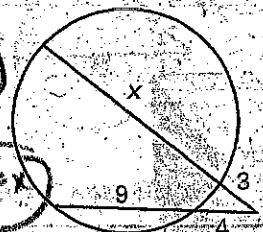
$$x = 2.5$$



$$3(x+3) = 4(13)$$

$$3x+9 = 52$$

$$14\frac{1}{3} = x$$



$$4(2x-1) = (x+7)^2$$

$$8x-4 = x^2+14x+49$$

$$0 = x^2+6x+53$$

$$(x+5)(x+10.6)$$

$$x = 5$$

$$1.6x = 2.5(x-3.6)$$

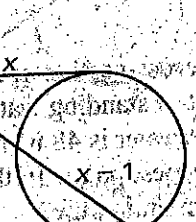
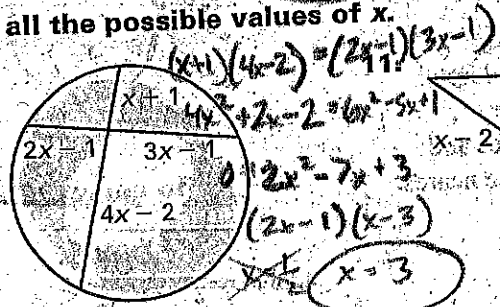
$$1.6x = 2.5x - 9$$

$$-0.9x = -9$$

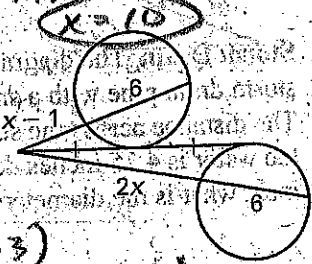
$$x = 10$$

Find all the possible values of x .

10.



12.



$$x^2 = (x-2)(2x-3)$$

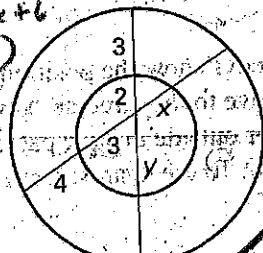
$$x^2 = 2x^2 - 7x + 6$$

$$0 = x^2 - 7x + 6$$

$$(x-6)(x-1)$$

$$x = 6$$

13. Can Theorem 10.14 be used to solve for x and y in the concentric circles at the right? Explain why or why not.



$$(12) (x-1)(x+5) = y^2$$

$$(2y)^2 = (2x)(2x+6)$$

$$4y^2 = 4x^2 + 12x$$

$$4(x^2 + 4x - 5) = 4x^2 + 12x$$

$$x = 5$$